

General Discussion*

Participants raised issues regarding the definition and measurement of the variable believed to drive inflation. Simon van Norden speculated that the use of the output gap, which is unobserved and subject to significant historical revisions, could be a cause of observed inflation persistence. Sharon Kozicki agreed that it could well be a contributing factor. Kozicki added, however, that she had started constructing a data set using CBO's¹ output gaps, which she maintains are subject to only small revisions. Similarly, Michael Dotsey asked whether Kozicki had examined the implications of using the more theoretically plausible marginal cost in place of the output gap as the key forcing variable for inflation. Kozicki responded that she had not, in part because her regression coefficients, estimated with the CBO's output gap data, were of the correct sign and statistically significant.

In response to Dotsey's second question, which focused on the differences in Canadian and U.S. results, Kozicki replied that they may be due to the fact that Canada was treated as a closed economy in the specification of the pricing equations, which is an incorrect assumption. Pierre Duguay later commented that the major difference between the United States and Canada is that Canada has a well-defined inflation target while the United States does not. Kozicki agreed that this has been true since the early 1990s, but her response was an explanation for the longer sample period differences in inflation persistence.

A number of questions were raised regarding the model of inflation expectations used. For example, Frank Smets noted that agents probably don't know the long-term inflation anchor, which is assumed by the model, and he suggested that this may account for the residual inflation persistence.

1. CBO: Congressional Budget Office.

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Kozicki answered that she doesn't make this assumption, but she agreed that the model wasn't fully specified in that she was using the market perception of inflation as the long-term anchor. She stated that the two measures don't necessarily coincide, particularly when there is imperfect credibility. Kozicki expressed interest in developing a model that would account for this. Michael Woodford proposed a way of modifying the standard model to account for the changes in the perceived long-run inflation targets in the inflation equation. Drawing on the methodology used by Tack Yun, he explained that one can suppose that agents who are not re-optimizing their prices automatically increase their price at the perceived long-run inflation rate between the occasions when they re-optimize. By making the additional assumption that inflation is time-varying (in Yun's case, it is constant), one gets inflation deviations from perceived long-run inflation rates as well as deviations of recent past perceptions of the long-run inflation rate.

In the first of his two comments, Steven Ambler noted that using the wage equation with micro foundations will create a forward-looking model where wage inflation depends on expected future inflation and a marginal cost term for households. Second, he described a way to incorporate backward-looking terms into the Phillips equation. He said that by using a rich enough model of marginal cost in place of the output gap, one will obtain lagged capital cost, lagged employment, future expected capital cost, and future expected employment terms in the equation. Once these terms are quasi-differenced, there will be a lagged level of inflation in the Phillips curve equation.

Gregor Smith asked Kozicki whether she thought that inflation expectations or the output gap was the reason for the flat-line behaviour of inflation in the 1990s. She responded that this behaviour is explained by both factors and that additional terms may explain things a little more but are not as significant. Pierre Duguay's opinion was that the flat line is explained by inflation-targeting monetary policy.

